

REMARKS

After entry of this response, claims 1-23 remain pending in the present application. Applicant respectfully requests reconsideration by the Examiner in light of the following remarks.

I. Rejection under 35 USC § 103

Claims 1-23 are rejected under 35 USC 103(a) as being unpatentable over Deno et al. (US 2003/0074029, hereinafter "Deno") in view of Bennett et al. (U.S. 5,231,098, hereinafter "Bennett"). Applicant respectfully traverses the rejection.

The pending claims recite determining an optimal ESI that corresponds to a maximal product of RF and PR for each of the test ESIs. Contrary to the assertion in the Office Action, none of the references, alone or in combination, teach or suggest determining an optimal ESI that corresponds to this maximal product of RF and PR.

In the Final Action, the Examiner takes the position that the normalized values of dP/dt MAX (ES) and dP/dt MIN (ES) meet the limitation to determining a potentiation ratio (PR), although that terminology is not used. The attorney for applicants did not understand this aspect of the Examiner's argument as previously presented. However, it is respectfully asserted that the Examiner's interpretation of Deno actually reinforces the conclusion that the claims of the present application are patentable.

Adopting the Examiner's position with respect to the calculation of the normalized values as discussed above, it is absolutely clear that Deno does not teach or suggest multiplying these values by a corresponding RF value for each ESI as would be required by the claims. In fact, under Examiner's reading of

Deno, it affirmatively teaches away from the invention as claimed, because it expressly teaches using these normalized values in a very different way.

In Deno, these normalized values are used to calculate a mechanical restitution parameter “MR”. It is the restitution parameter that is subsequently used to determine the burst pacing parameters. Further, neither the individual normalized values nor the calculated restitution parameter “MR are disclosed as multiplied by the measured recirculation factor (RF).

Further, the value of RF as discussed in Deno isn’t even calculated for each of the test ESI intervals. Instead, a maximum dP/dt is calculated for each ESI and these values are used together to calculate the recirculation factor (“RF”) value referred to in Deno. It is the RF value derived from the individual dP/dt measurements, rather than the individual measurements themselves that is used to set the burst pacing parameters. Neither the individual dP/dt values nor the “RF” parameter derived therefrom are disclosed as multiplied by the normalized values. Neither are they disclosed as multiplied by the “MR” parameter.

Based upon the Examiner’s interpretation of Deno, it is clear that to the extent parameters corresponding to the “RF” and “PR” parameters of the claims are disclosed, they are specifically disclosed as being used in an altogether different manner to regulate the burst pacing parameters. The mere fact two parameters are used to calculate a value does not make it obvious to combine them in all possible ways to calculate the value. For example, the fact that voltage can be calculated by multiplying current by resistance does not make it obvious that voltage can be calculated by adding current and resistance.

It is respectfully asserted that it cannot reasonably be argued that Deno makes it be obvious to take two values which are specifically used to determine burst pacing parameters in a manner much different than that required by the claims and use them both together to determine a desired ESI duration as disclosed in the claims. The only source of record for such a suggestion is the present application.

The Final Office Action again acknowledges Deno's deficiency with regard to teaching determining a product of RF and PR for each ESI and using it to calculate a desired ESI. The Examiner cites and cites Bennett's disclosure pertaining to control of PESP stimulation based on CSI and CPI as providing this missing teaching. The Final Office Action, however, does acknowledge that Bennett does not in fact even teach utilizing a product of the CSI and CPI variables. The Final Office Action states that it is well known to the art to do so, but cites no references to support this assertion. More is required than a mere conclusory statement is required to support an obviousness argument of this type.

Further, this obviousness argument also relies on the unexplained assertion that the CSI and CPI values of Bennett are analogous to the claimed potentiation ratio and recirculation factor (PR and RF) of the present invention. Again, more is required than a mere conclusory statement to support an obviousness rejection of this type. The mere fact they are measured physiological variables is not enough. For example, the fact that volts are calculated by multiplying current by resistance does not suggest that voltage can be calculated by multiplying power by energy, even though they are all measured electrical parameters. The Examiner has an obligation to offer an explanation meeting the standard of common sense supporting the asserted equivalency of the measured variables.

Accordingly, Applicant respectfully requests the withdrawal of the rejection of claims 1-23 under 35 USC 103(a) as being unpatentable over Deno in view of Bennett.

II. Conclusion

In view of the foregoing, it is submitted that this application is in condition for allowance. Favorable consideration and prompt allowance of the application are respectfully requested.

Should any issues remain outstanding, the Examiner is urged to telephone the undersigned to expedite prosecution. The Commissioner is authorized to charge any deficiencies and credit any overpayments to Deposit Account No. 13-2546.

Respectfully submitted,

March 10, 2010
Date

/Reed A. Duthler/
Reed A. Duthler
Reg. No. 30,626
(763) 526-1564
Customer No. 27581